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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/672,776 09/29/00 ONO

F 061045

EXAMINER

IM52/1101  
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BROWN, C  
ART UNIT

PAPER NUMBER

1765

DATE MAILED:

11/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.  
09/672,776

Applicant(s)  
Ono

Examiner  
Charlotte A. Brown

Art Unit  
1765



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 22, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other:

Art Unit: 1765

### DETAILED ACTION

1. The declaration under 37 CFR 1.132 filed August 22, 2001 is insufficient to overcome the rejections of claims 6-9 because the conclusion is not supported by the data. The conclusion states that as the surface area of the alumina becomes less than 30 m<sup>2</sup>/g, the number of scratches increases. In comparative example two of the data table, a surface area of 27 m<sup>2</sup>/g is provided. The corresponding number of scratches is 5. The number of scratches in comparative example two is identical to the number of scratches in comparative example one in which the surface area is 50 m<sup>2</sup>/g. Therefore, the conclusion is not supported by the data.

2. Applicant's arguments with respect to claims 6-9 have been considered but are moot in view of the new ground(s) of rejection.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasai et al. (US 6,007,592) in view of Sakatani et al. (US 5,804,513).

Kasai discloses a polishing composition for an aluminum disk that includes water, an alumina abrasive agent and a polishing accelerator. The polishing accelerator is preferably basic

Art Unit: 1765

aluminum nitrate. The abrasive agent is alumina. The alumina particles have a mean particle size of 0.1 to 0.4  $\mu\text{m}$  (Column 3, lines 56-62). The alumina has an alumina crystalline structure with an alpha-phase content of 80% to 95% (Column 4, lines 4-16). This reads on the applicant's limitation that the alumina particles have an alpha conversion ratio of from 65% to 90%.

Unlike the claimed invention, Kasai does not teach a method in which the alumina particles have a specific surface area of from 30 to 80  $\text{m}^2/\text{g}$ .

Sakatani discloses an abrasive composition for polishing and planarizing a metal layer formed on a semiconductor substrate. The abrasive particles of the present invention comprise aluminum oxide. The particles have a mean particle size of 2  $\mu\text{m}$  or less, preferably about 0.1  $\mu\text{m}$  to 1.5  $\mu\text{m}$ . The specific surface area of the abrasive particle of the present invention is preferably about 40  $\text{m}^2/\text{g}$  to about 150  $\text{m}^2/\text{g}$  (Column 4, lines 20-32). This reads on the applicant's limitation of using alumina fine particles with a specific surface area of from 30 to 80  $\text{m}^2/\text{g}$ . Alpha-type aluminum oxide is used (Column 4, lines 37-38).

It is the Examiner's position that a person having ordinary skill in the art would have found it obvious to modify Kasai with the method of using alumina particles with a specific surface area of from 40 to 150  $\text{m}^2/\text{g}$  as taught by Sakatani. The method of using alumina particles with a specific surface area in the polishing composition would have been anticipated in order to reduce the generation of scratches on the polishing surface.


Art Unit: 1765

5. Any inquiry concerning this communication from the Examiner should be directed to Charlotte A. Brown whose telephone number is (703) 305-0727. The Examiner can normally be reached during the hours of 9:00AM to 6:30PM.

The fax phone numbers for the organization where this application or proceeding is assigned are 704-305-5408 for regular communications and 703-305-3599 for After Final communications.

CAB

October 30, 2001

  
BENJAMIN L. UTECH  
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